6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2017-0164; FRL-9976-14-Region 5]

Air Plan Approval; Ohio; Ohio NSR $PM_{2.5}$ Precursors

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, under the Clean Air Act (CAA), revisions to Ohio's state implementation plan (SIP) as requested by the Ohio Environmental Protection Agency (OEPA) on March 10, 2017, and supplemented on July 18, 2017. The revisions to Ohio's SIP implement certain EPA regulations for particulate matter smaller than 2.5 micrometers ($PM_{2.5}$) for nonattainment areas by establishing definitions related to $PM_{2.5}$ and defining $PM_{2.5}$ precursors. The revisions also incorporate the findings of a comprehensive precursor demonstration performed by OEPA, which determined that volatile organic compounds (VOC) and ammonia (NH_3) are an insignificant source of $PM_{2.5}$ for the purpose of new source review in nonattainment areas in Ohio.

DATES: Comments must be received on or before **[insert date 30 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No.

EPA-R05-OAR-2017-0164 at http://www.regulations.gov, or via email to damico.genevieve@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the "For Further Information Contact" section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Charmagne Ackerman, Environmental Engineer, Air Permits Section, Air Programs Branch

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SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

I. Background

II. Review of State Submittals

III. What Action is EPA Taking?

IV. Incorporation by Reference.

V. Statutory and Executive Order Reviews.

I. Background

On March 10, 2017, OEPA submitted to EPA revisions to Ohio Administrative Code (OAC) chapter 3745-31-01. The revisions were made to implement the "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements." Subsequently, on July 18, 2017, OEPA submitted to EPA a letter clarifying the March 10, 2017 submittal. OEPA clarified that limited portions of OAC 3745-31-01 should be included as a SIP revision. The revisions to OAC 3745-31-01, specifically, subparagraph (LLL)(6), paragraph (NNN), paragraph (WWWW), paragraph (NNNNN), paragraph (VVVVV), and subparagraph

(LLLLLL)(2)(ee) will make the rule consistent with 40 CFR 51.165 and 40 CFR 52.21.

II. Review of State Submittals

On August 24, 2016, EPA published the "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" ($PM_{2.5}$ SIP Requirements Rule)(81 FR 58009) as a final rule in the *Federal Register*. These 2016 regulations provide details on meeting the statutory SIP requirements that apply to areas designated nonattainment for any $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS). As part of the $PM_{2.5}$ SIP Requirements Rule, EPA has interpreted the requirements of the CAA to allow the state to provide a "precursor demonstration" to the EPA that supports the determination that one or more $PM_{2.5}$ precursor need not be subject to control and planning requirements in a given nonattainment area. EPA has determined that sulfur dioxide, nitrogen oxides, VOC, and NH_3 are factual and scientific precursors to PM, and thus the attainment plan requirements of subpart 4 initially apply equally to emissions of direct $PM_{2.5}$ and all of its identified precursors. CAA section 189(e) explicitly requires the control of major stationary sources of $PM_{2.5}$ precursors, unless there is a demonstration to the

satisfaction of the Administrator that such major stationary sources do not contribute significantly to PM levels that exceed the standards in the area. The $PM_{2.5}$ SIP Requirements Rule became effective on October 16, 2016.

OEPA provided a modeling analysis for both VOC and NH_3 intended to show that increases in emissions of these precursors that may result from new or modified sources would not make a significant contribution to $PM_{2.5}$ concentrations in the area. This demonstration justifies the state's determination that major stationary sources of these precursors do not need to be regulated under the NNSR program for the area. For NNSR permitting purposes, CAA section 189(e), as interpreted by the $PM_{2.5}$ SIP Requirements Rule, provides an option for the state to provide a precursor demonstration intended to show that increases in emissions from potential new and existing major stationary sources of a particular precursor would not contribute significantly to levels that exceed the 2012 $PM_{2.5}$ NAAQS in a particular nonattainment area. 40 CFR 51.1006(a)(3).

In particular, EPA's regulations provide that a state choosing to submit an NNSR precursor demonstration should evaluate the sensitivity of $PM_{2.5}$ levels in the nonattainment area to an increase in emissions of the precursor. If the state

demonstrates that the estimated air quality changes determined through such an analysis are not significant, based on the facts and circumstances of the area, the state may use this information to identify new major stationary sources and major modifications of a precursor that will not be considered to contribute significantly to $PM_{2.5}$ levels that exceed the standard in the nonattainment area under CAA section 189(e). *Id.* 51.1006(a)(3)(i). If EPA approves the state's NNSR precursor demonstration for a nonattainment area, major sources of the relevant precursor can be exempted from the NNSR major source permitting requirements for $PM_{2.5}$ with respect to that precursor. *Id.* 51.1006(a)(3)(ii).

For NNSR permitting purposes, OEPA conducted sensitivity analyses to examine potential increases in emissions through a model simulation that evaluates the effect on $PM_{2.5}$ concentrations in the area resulting from a given set of precursor emission increases from one or more new or modified stationary sources. On October 14, 2016, OEPA submitted its non-significance finding, including the precursor demonstration, as part of OEPA's attainment demonstration for the 2012 $PM_{2.5}$ annual standard. The attainment demonstration for the $PM_{2.5}$ annual standard will be addressed in a separate action.

OEPA and the Lake Michigan Air Directors Consortium (LADCO) used the 2011 and 2021 comprehensive modeling inventories and platforms for this analysis. OEPA and LADCO initially ran a baseline model to predict the $PM_{2.5}$ concentrations in Cleveland in 2021, and then modeled any potential increases of precursors for the same year to determine the impact of the growth of precursors to the areas concentrations. To help determine a theoretical growth scenario as a result of major source expansion (new or modified), OEPA first prepared inventories for VOC and NH_3 for 2008 to 2014 for the entire State from Ohio's annual emissions reporting program. OEPA used inventories for the entire State in order to determine what types of major sources/source categories are likely to expand (new or modified) within the Cleveland area and at what magnitude (tons per year) those expansions are likely to occur.

Consistent with EPA's regulation and draft guidance, OEPA and LADCO have performed sensitivity analyses of potential increases in emissions through a model simulation that evaluates the effect on $PM_{2.5}$ concentrations in the nonattainment area (including unmonitored areas) resulting from a given set of hypothetical NH_3 or VOC precursor emission increases from modified major stationary sources of the respective precursors

in the nonattainment area.

For the NH_3 analysis, OEPA assumed emissions increases at three existing locations of NH_3 in the area, as these would be the most likely future areas of growth in the Cleveland area. EPA believes that the use of the historical inventories to predict growth is reflective of the future potential increases specific to the Cleveland area given the current types of facilities and their respective locations, the urban density and ability to expand or build, as well as the types of state regulation or other federal requirements (such as National Emission Standards for Hazardous Air Pollutants) on facility types and controls required for other pollutants. EPA believes that this is an acceptable approach to estimating potential future growth.

In addition to the modeled emissions increases based on historical growth at sources, LADCO and OEPA performed an additional NH_3 modeling analysis (submitted July 18, 2017) based on a 100 tons per year (TPY) emissions increase (to represent major sources) in each modeled grid cell in the nonattainment area. EPA believes that this is a sufficiently conservative analysis that exceeds the level of actual potential NH_3 emissions growth likely to occur in the area. Thus, this analysis serves

as a reasonable evaluation of the sensitivity of $PM_{2.5}$ concentrations to a large emissions increase across the spatial area. Both of these approaches are consistent with suggested modeling in EPA's draft guidance.

For the VOC analysis, OEPA added 1,486 TPY of VOC emissions at 3 existing source locations where VOC emissions increases potentially could occur in the nonattainment area. Compared to the 2011 inventory, this represents a 75% increase in VOC emissions from existing stationary sources (Electric Generating Units (EGU) and non-EGU). Compared to the 2021 projected inventory, this represents an 80% increase in stationary source emissions. For the NH_3 analysis, OEPA added 325 TPY of NH_3 emissions (scenario 1) to 3 existing source locations where NH_3 emissions increases potentially could occur in the nonattainment area. Compared to the 2011 inventory, this represents a 447% increase in NH_3 emissions from existing stationary sources. Compared to the 2021 projected inventory, this represents a 449% increase in NH_3 from stationary sources. The additional NH_3 analysis (scenario 2) had a total emissions increase of 1,700 TPY, which is over 500% higher growth than the historical NH_3 growth (scenario 1).

OEPA found that the addition of the NH_3 emissions

(approximately 350 TPY) into the model based on historical growth (scenario 1) would result in a peak impact of 0.08 micrograms per cubic meter ($\mu g/m^3$), and the addition of the above VOC emissions would result in a peak impact of 0.02 $\mu g/m^3$. The modeled impacts are well below the recommended significance contribution threshold of 0.2 $\mu g/m^3$; for VOC it is an order of magnitude difference, and for NH_3 the maximum value is less than half the recommended significant contribution threshold level. The results of NH_3 modeling for scenario 2 indicate that, even with a conservatively large NH_3 increase, the maximum impact was 0.24 $\mu g/m^3$, which is only slightly above the recommended contribution threshold of 0.2 ug/m^3.

While the increase is slightly above the recommended contribution threshold, EPA believes that it is reasonable to conclude that NH_3 emissions from major stationary sources (in the context of a NNSR precursor demonstration) do not contribute significantly to $PM_{2.5}$ concentrations in the nonattainment area for the following reasons: historical growth of NH_3 sources in the area are significantly less than what was modeled for scenario 2; the only likely future increases of NH_3 emissions from major sources in the area are from the increased use of NH_3 for EGU NO_x control (ammonia slip) and would likely occur at

existing EGUs (as modeled in scenario 1); the area continues to trend downward in both monitored $PM_{2.5}$ concentrations and $PM_{2.5}$ (direct and precursor) emissions; and current preliminary monitoring data shows the area is attaining the standard. This small amount of additional ambient $PM_{2.5}$ concentration, based on the modeling analysis, would therefore not interfere with the area's ability to attain the standard given that the current preliminary design value for 2015-2017 is 11.3 µg/m^3, and the additional modeled increase of 0.24 µg/m^3 would not impact the areas ability to attain or maintain the NAAQS.

Based on the results of the modeling demonstration and the additional factors described in this section, EPA is proposing to determine that emissions increases of either VOC or NH_3 from new and modified major stationary sources would not contribute significantly to $PM_{2.5}$ levels that exceed the 2012 $PM_{2.5}$ NAAQS in the Cleveland nonattainment area. Accordingly, we are proposing to approve Ohio's submitted revisions to its $PM_{2.5}$ SIP, and new or modified major sources of VOC and NH_3 may be exempted from the state's NNSR program requirements for $PM_{2.5}$ in the Cleveland $PM_{2.5}$ nonattainment area.

III. What Action is EPA Taking?

EPA is proposing approval of the SIP revision submittal.

Ohio's SIP revisions comply with regulations EPA designed to address the $PM_{2.5}$ NAAQS. EPA finds that these revisions implement the NNSR rules by defining precursors for $PM_{2.5}$, as required by EPA's regulations.

EPA is proposing approval of revisions to OAC 3745-31-01, specifically subparagraph (LLL)(6), paragraph (NNN), paragraph (WWWW), paragraph (NNNNN), paragraph (VVVVV), and subparagraph (LLLLLL)(2)(ee). EPA finds that the revisions are consistent with Federal requirements.

IV. Incorporation by Reference.

In this rule, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference revisions to Ohio Administrative Code 3745-31-01 including subparagraph (LLL)(6), paragraph (NNN), paragraph (WWWW), paragraph (NNNNN), paragraph (VVVVV), and subparagraph (LLLLLL)(2)(ee), effective on March 20, 2017 . EPA has made, and will continue to make, these documents generally available through www.regulations.gov, and at the EPA Region 5 Office (please contact the person identified in the "For Further Information Contact" section of this preamble for more information.

VI. Statutory and Executive Order Reviews.

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally

permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: March 20, 2018.

Edward H. Chu,
Acting Regional Administrator, Region 5.

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